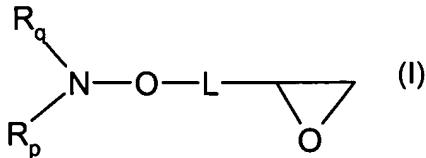


In the Claims

1. (currently amended) A Method for the preparation of a comb or star copolymer comprising
a) polymerisingpolymerizing in a first step one or more epoxy group containing monomers to obtain a polyether, wherein at least one monomer is of formula (I)



wherein L is a linking group selected from the group consisting of C₁-C₁₈alkylene, phenylene, phenylene-C₁-C₁₈alkylene, C₁-C₁₈alkylene-phenylene, C₁-C₁₈alkylene-phenylene-oxy and C₅-C₁₂cycloalkylene;

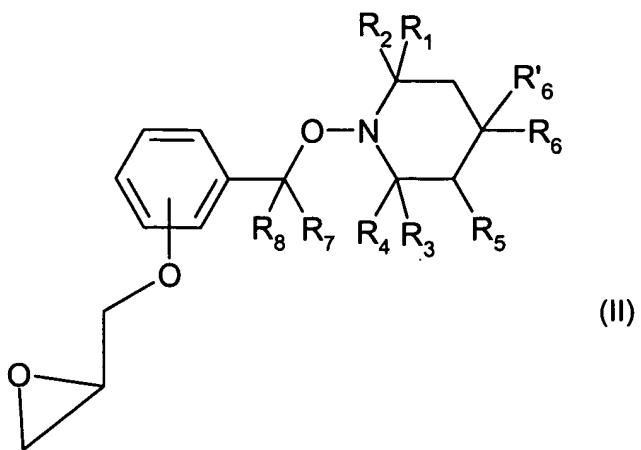
R_p and R_q are independently tertiary bound C₄-C₂₈alkyl groups which are unsubstituted or substituted by one or more electron withdrawing groups or by phenyl; or

R_p and R_q together form a 5 or 6 membered heterocyclic ring which is substituted at least by 4 C₁-C₄alkyl groups and which may be interrupted by a further nitrogen or oxygen atom;

and in a second step

- b) adding to the polymer obtained in step a) at least one ethylenically unsaturated monomer or oligomer, heating the resulting mixture to a temperature where cleavage of the nitroxylether bond occurs and radical polymerization starts; and polymerizing to the desired degree.

2. (currently amended) A methodprocess according to claim 1 wherein the monomer of formula (I) is of formula (II)



wherein

R_1, R_2, R_3 and R_4 are independently of each other $C_1\text{-}C_4$ alkyl;

R_5 is hydrogen or $C_1\text{-}C_4$ alkyl;

R'_6 is hydrogen and R_6 is H, OR_{10} , $NR_{10}R_{11}$, $-O\text{-}C(O)\text{-}R_{10}$ or $NR_{11}\text{-}C(O)\text{-}R_{10}$;

R_{10} and R_{11} independently are hydrogen, $C_1\text{-}C_{18}$ alkyl, $C_2\text{-}C_{18}$ alkenyl, $C_2\text{-}C_{18}$ alkinyl or $C_2\text{-}C_{18}$ alkyl which is substituted by at least one hydroxy group or, if R_6 is $NR_{10}R_{11}$, taken together, form a $C_2\text{-}C_{12}$ alkylene bridge or a $C_2\text{-}C_{12}$ alkylene bridge interrupted by at least one O atom; or

R_6 and R'_6 together are both hydrogen, a group $=O$ or $=N\text{-}O\text{-}R_{20}$ wherein

R_{20} is H, straight or branched $C_1\text{-}C_{18}$ alkyl, $C_3\text{-}C_{18}$ alkenyl or $C_3\text{-}C_{18}$ alkinyl, which may be unsubstituted or substituted, by one or more OH, $C_1\text{-}C_8$ alkoxy, carboxy, $C_1\text{-}C_8$ alkoxycarbonyl;

$C_5\text{-}C_{12}$ cycloalkyl or $C_5\text{-}C_{12}$ cycloalkenyl;

phenyl, $C_7\text{-}C_9$ phenylalkyl or naphthyl which may be unsubstituted or substituted by one or more

$C_1\text{-}C_8$ alkyl, halogen, OH, $C_1\text{-}C_8$ alkoxy, carboxy, $C_1\text{-}C_8$ alkoxycarbonyl;

$-C(O)\text{-}C_1\text{-}C_{36}$ alkyl, or an acyl moiety of a α,β -unsaturated carboxylic acid having 3 to 5 carbon atoms or of an aromatic carboxylic acid having 7 to 15 carbon atoms;

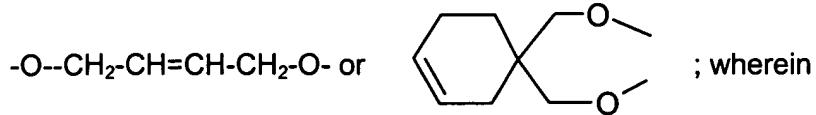
$-SO_3^-Q^+$, $-PO(O^-Q^+)_2$, $-P(O)(OR_2)_2$, $-SO_2\text{-}R_2$, $-CO\text{-}NH\text{-}R_2$, $-CONH_2$, $COOR_2$, or $Si(Me)_3$, wherein Q^+ is H^+ , ammonium or an alkali metal cation; or

R_6 and R'_6 are independently $-O\text{-}C_1\text{-}C_{12}$ alkyl, $-O\text{-}C_3\text{-}C_{12}$ alkenyl, $-O\text{-}C_3\text{-}C_{12}$ alkinyl, $-O\text{-}C_5\text{-}C_8$ cycloalkyl, $-O\text{-}phenyl$, $-O\text{-}naphthyl$, $-O\text{-}C_7\text{-}C_9$ phenylalkyl; or

R_6 and R'_6 together form one of the bivalent groups $-O\text{-}C(R_{21})(R_{22})\text{-}CH(R_{23})\text{-}O\text{-}$,

$-O\text{-}CH(R_{21})\text{-}CH_{22}\text{-}C(R_{22})(R_{23})\text{-}O\text{-}$, $-O\text{-}CH(R_{22})\text{-}CH_2\text{-}C(R_{21})(R_{23})\text{-}O\text{-}$, $-O\text{-}CH_2\text{-}C(R_{21})(R_{22})\text{-}CH(R_{23})\text{-}O\text{-}$,

$-O\text{-}o\text{-}phenylene\text{-}O\text{-}$, $-O\text{-}1,2\text{-}cyclohexyliden\text{-}O\text{-}$,



R₂₁ is hydrogen, C₁-C₁₂alkyl, COOH, COO-(C₁-C₁₂)alkyl or CH₂OR₂₄;

R₂₂ and R₂₃ are independently hydrogen, methyl ethyl, COOH or COO-(C₁-C₁₂)alkyl;

R₂₄ is hydrogen, C₁-C₁₂alkyl, benzyl, or a monovalent acyl residue derived from an aliphatic, cycloaliphatic or aromatic monocarboxylic acid having up to 18 carbon atoms; and

R₇ and R₈ are independently hydrogen or C₁-C₁₈alkyl.

3. (original) A method according to claim 2 wherein R₁, R₂, R₃, R₄ are methyl, or R₁ and R₃ are ethyl and R₂ and R₄ are methyl, or R₁ and R₂ are ethyl and R₃ and R₄ are methyl.

4. (original) A method according to claim 2 wherein R₅ is hydrogen or methyl.

5. (original) A method according to claim 2 wherein

R'₆ is hydrogen and R₆ is H, OR₁₀, NR₁₀R₁₁, -O-C(O)-R₁₀ or NR₁₁-C(O)-R₁₀;

R₁₀ and R₁₁ independently are hydrogen, C₁-C₁₈alkyl, C₂-C₁₈alkenyl, C₂-C₁₈alkinyl or C₂-C₁₈alkyl which is substituted by at least one hydroxy group or, if R₆ is NR₁₀R₁₁, taken together, form a C₂-C₁₂alkylene bridge or a C₂-C₁₂-alkylene bridge interrupted by at least one O atom; or

R₆ and R'₆ together are both hydrogen, a group =O or =N-O-R₂₀ wherein

R₂₀ is H or straight or branched C₁-C₁₈alkyl.

6. (currently amended) A method according to claim 2 wherein

R₆ and R'₆ together form one of the bivalent groups -O-C(R₂₁)(R₂₂)-CH(R₂₃)-O-,

-O-CH(R₂₁)-CH₂₂-C(R₂₂)(R₂₃)-O-, -O-CH(R₂₂)-CH₂-C(R₂₁)(R₂₃)-O-[.] or

-O-CH₂-C(R₂₁)(R₂₂)-CH(R₂₃)-O- whereand R₂₁, R₂₂ and R₂₃ have the meaning as defined in claim 2.

7. (currently amended) A method according to claim 1 where step a) comprises polymerizing an wherein the epoxy group containing monomer different from formula (I), which monomer is selected from the group consisting of ethylene oxide, propylene oxide, 2,3-epoxypropyl-phenylether, 2,3-epoxypropyl-4-nonyl-phenylether, epichlorohydrine and 2,3-epoxypropyl-2,2,3,3,4,4,5,5-octafluoropentylether.

8. (currently amended) A method according to claim 1 wherein in step~~Step~~ a) the weight ratio of the monomer of formula (I) to the sum of the other monomers is from 99:1 to 1:99.

9. (currently amended) A method according to claim 1 wherein in step b) the ethylenically unsaturated monomer or oligomer is selected from the group consisting of styrene, substituted styrene, conjugated dienes, vinyl acetate, vinylpyrrolidone, vinylimidazole, maleic anhydride, (alkyl)acrylic acid anhydrides, (alkyl)acrylic acid salts, (alkyl)acrylic esters, (meth)acrylonitriles, (alkyl)acrylamides, vinyl halides and vinylidene halides.

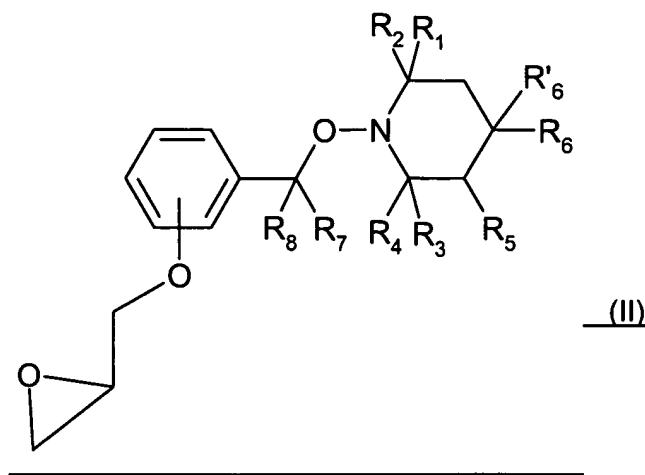
10. (currently amended) A method according to claim 9 wherein in step b) the ethylenically unsaturated monomers are styrene, methylacrylate, ethylacrylate, butylacrylate, isobutylacrylate, tert[[.]] butylacrylate, hydroxyethylacrylate, hydroxypropylacrylate, dimethylaminoethylacrylate, methyl(meth)acrylate, ethyl(meth)acrylate, butyl(meth)acrylate, hydroxyethyl(meth)acrylate, hydroxypropyl(meth)acrylate, dimethylaminoethyl(meth)acrylate, acrylonitrile, acrylamide, methacrylamide or dimethylaminopropyl-methacrylamide.

11. (original) A method according to claim 1 wherein in step b) the weight ratio between the polyether prepared in step a) and the ethylenically unsaturated monomer is from 90:10 to 10:90.

12. (original) A method according to claim 1 wherein in step b) the polymerization temperature is from 80° C to 160° C.

13. (currently amended) A composition comprising a compound of formula (II)~~as defined in claim 2~~, at least one epoxy functional monomer different from that of formula (II) and optionally water or an organic solvent or a mixture[[s]] thereof.

where the compound of formula (II) is



wherein

R₁, R₂, R₃ and R₄ are independently of each other C₁-C₄alkyl;

R₅ is hydrogen or C₁-C₄alkyl;

R'₆ is hydrogen and R₆ is H, OR₁₀, NR₁₀R₁₁, -O-C(O)-R₁₀ or NR₁₁-C(O)-R₁₀;

R₁₀ and R₁₁ independently are hydrogen, C₁-C₁₈alkyl, C₂-C₁₈alkenyl, C₂-C₁₈alkinyl or C₂-C₁₈alkyl which is substituted by at least one hydroxy group or, if R₆ is NR₁₀R₁₁, taken together, form a C₂-C₁₂alkylene bridge or a C₂-C₁₂alkylene bridge interrupted by at least one O atom; or

R₆ and R'₆ together are both hydrogen, a group =O or =N-O-R₂₀ wherein

R₂₀ is H, straight or branched C₁-C₁₈alkyl, C₃-C₁₈alkenyl or C₃-C₁₈alkinyl, which may be unsubstituted or substituted, by one or more OH, C₁-C₈alkoxy, carboxy, C₁-C₈alkoxycarbonyl;

C₅-C₁₂cycloalkyl or C₅-C₁₂cycloalkenyl;

phenyl, C₇-C₉phenylalkyl or naphthyl which may be unsubstituted or substituted by one or more

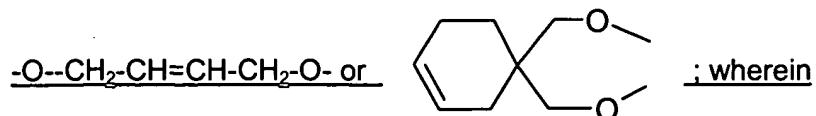
C₁-C₈alkyl, halogen, OH, C₁-C₈alkoxy, carboxy, C₁-C₈alkoxycarbonyl;

-C(O)-C₁-C₃₆alkyl, or an acyl moiety of a α,β-unsaturated carboxylic acid having 3 to 5 carbon atoms or of an aromatic carboxylic acid having 7 to 15 carbon atoms;

-SO₃Q⁺, -PO(O⁻Q⁺)₂, -P(O)(OR₂)₂, -SO₂R₂, -CO-NH-R₂, -CONH₂, COOR₂, or Si(Me)₃, wherein Q⁺ is H⁺, ammonium or an alkali metal cation; or

R₆ and R'₆ are independently -O-C₁-C₁₂alkyl, -O-C₃-C₁₂alkenyl, -O-C₃-C₁₂alkinyl, -O-C₅-C₈cycloalkyl, -O-phenyl, -O-naphthyl, -O-C₇-C₉phenylalkyl; or

R₆ and R'₆ together form one of the bivalent groups -O-C(R₂₁)(R₂₂)-CH(R₂₃)-O-, -O-CH(R₂₁)-CH₂-C(R₂₂)(R₂₃)-O-, -O-CH(R₂₂)-CH₂-C(R₂₁)(R₂₃)-O-, -O-CH₂-C(R₂₁)(R₂₂)-CH(R₂₃)-O-, -O-o-phenylene-O-, -O-1,2-cyclohexyliden-O-,



R₂₁ is hydrogen, C₁-C₁₂alkyl, COOH, COO-(C₁-C₁₂)alkyl or CH₂OR₂₄;

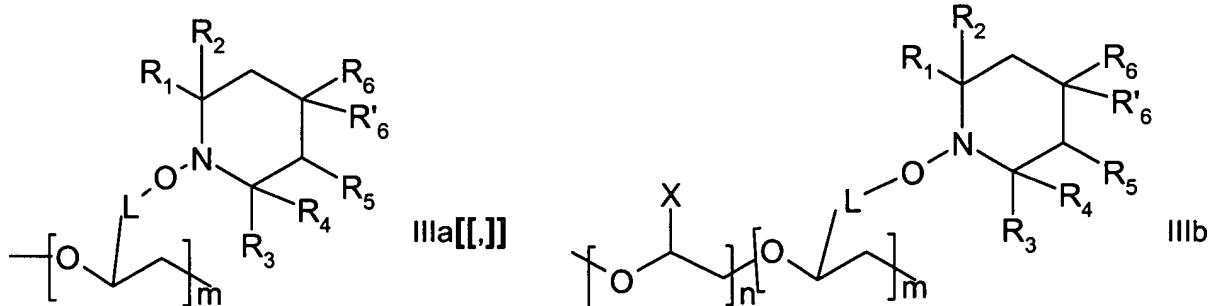
R₂₂ and R₂₃ are independently hydrogen, methyl ethyl, COOH or COO-(C₁-C₁₂)alkyl;

R₂₄ is hydrogen, C₁-C₁₂alkyl, benzyl, or a monovalent acyl residue derived from an aliphatic, cycloaliphatic or aromatic monocarboxylic acid having up to 18 carbon atoms; and

R₇ and R₈ are independently hydrogen or C₁-C₁₈alkyl.

14. (currently amended) A polyether obtained according to step a) of the method of claim 1.

15. (currently amended) A polyether obtained according to step a) of claim 2, having a repetitive structural element of formula IIIa or IIIb



wherein R₁, R₂, R₃, R₄, R₅, R₆, R'₆ and L are as defined above [[,]]_m and n are number from 10 to 1000 and

X is H, CH₃, CH₂-O-C₆H₅, CH₂-O-C₆H₅-C₉H₁₉, -CH₂Cl or CH₂-O-CH₂-(CF₂)₃CHF₂.

16. (currently amended) A comb or star copolymer obtained ~~able~~ according to the method of claim 1.

17. (currently amended) A comb or star copolymer according to claim 16 wherein the ethylenically unsaturated monomer forming the comb or star is selected from the group consisting of styrene, substituted styrene, (alkyl)acrylic acid anhydrides, (alkyl)acrylic acid salts, (alkyl)acrylic esters, (meth)acrylonitriles and (alkyl)acrylamides.

18. (canceled)

19. (currently amended) Use of a A composition comprising a comb or star copolymer obtained ~~able~~ according to the method of claim 1 as adhesive, surface modifier, surfactant or compatibilizer in and a thermoplastic, elastic or thermosetting polymer[[s]] or as plastic material for extrusion or injection molding for shaping parts.